Praveen LINGA PhD PEng
Dean's Chair Associate Professor
Department of Chemical and Biomolecular Engineering
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Lab Social: https://web.facebook.com/LingaLab

QUALIFICATIONS

P.Eng. – Chemical 2018
Professional Engineers Board (PEB) Singapore

Ph.D. – Chemical & Biological Engineering 2004-2009
The University of British Columbia (UBC), Vancouver, BC, Canada
Thesis: Separation of CO_2 from flue gas (post combustion capture) via hydrate crystallization
Supervisor: Professor Peter Englezos

Master of Technology (M.Tech.) – Chemical Engineering 2000-2002
Indian Institute of Technology, Kharagpur, India
Thesis: Simulation studies on furfural extraction column
Supervisor: Professor S. Ray

Bachelor of Technology (B.Tech.) – Chemical Engineering 1996-2000
University of Madras, Chennai, India
First class with distinction

AWARDS & HONORS

- Most Cited Paper award, *Desalination* (2019)
- Highly Cited Researcher in Engineering, Clarivate Analytics (2018)
- Best Paper Award, Applied Energy (2018, 2017)
- Teaching Honors List for AY2016/17, Faculty of Engineering NUS (2018)
- Most Cited Paper award, *Energy* Journal (2018, 2017)
- Most Cited Paper award, *Applied Energy* Journal (2018)
- Most Cited Paper award, *International Journal of Greenhouse Gas Control* (2018, 2017)
- Most Cited Paper award, *Energy* Journal (2018)
- D. W. Davidson Award, International Conference on Gas Hydrates (ICGH9), Denver USA (2017)
- Young Investigator Award, *Energies* Journal based in Switzerland (2017)
- Outstanding Young Faculty Award, AIChE Singapore Local Section (2017)
- Annual Teaching Excellence Award (ATEA), NUS (2017)
- Young Researcher Award (YRA), NUS (2017)
- Faculty Young Researcher Award, NUS Engineering (2017)
- Most Cited Paper award, *Chemical Engineering Science* Journal (2017, 2016, 2015)

- 2017 Class of Influential Researchers, Invited by *I&EC Research* Journal (2017)
- Teaching Honors List for AY2015/16, Faculty of Engineering NUS (2016)
- Highly Commendable Award for Research Project of the Year and Finalist for Energy Award, IChemE Singapore (2016)
- Best Paper Award, Applied Energy (2016)
- Featured by EMA in its exclusive 3Qs interview series that features industry leaders and innovators in energy domain, EMA (2016)
- Service Award, AIChE Singapore Local Section (2015)
- Most Cited Paper award, *International Journal of Greenhouse Gas Control* (2015)
- Most Cited Paper award, *Chemical Engineering Science* Journal (2012)
- Award to participate in summer school on carbon dioxide capture and storage, IEA (2008)
- Best presenter and Excellent paper award, International Conference on Sustainable Petroleum Development held in Beijing China (2007)
- Early Faculty Induction Program Fellowship, AICTE in India, awarded for academic excellence and to pursue a career in academia (2000 – 2002)
- Gold Medalist, Class topper during Bachelor's degree, SREC (2000)

WORK EXPERIENCE

- 2019.01 – 2021.12: **Dean's Chair Professor**, Department of Chemical & Biomolecular Engineering, National University of Singapore
- 2016.07 – Present: **Associate Professor** (with tenure), Department of Chemical & Biomolecular Engineering, National University of Singapore
- 2016.07 – Present: **Co-Lead** for Natural Gas research, Centre for Energy Research & Technology (CERT), National University of Singapore
- 2018.03 – Present: **Visiting Professor**, Guangzhou Institute of Energy Conversion (GIEC), Chinese Academy of Sciences, China
- 2010.07 – 2016.06: **Assistant Professor**, Department of Chemical & Biomolecular Engineering, National University of Singapore
- 2009.04 – 2010.04: **Postdoctoral Fellow**, Department of Chemical & Biological Engineering, The University of British Columbia
- 2004.05 – 2009.03: **Graduate Research/Teaching Assistant**, Department of Chemical & Biological Engineering, The University of British Columbia
- 2002.04 – 2004.03: **Senior Lecturer**, M. S. Engineering College, Kilakarai, India

EDITORIAL SERVICE

- **Subject Editor**: Applied Energy (Elsevier), 2018.09 – present
- **Associate Editor**: Journal of Natural Gas Science and Engineering (Elsevier), 2015.03 – present
- **Editorial Advisory Board Member**: Energy & Fuels (ACS Publisher), 2019.01 – present
- **Editorial Board Member**: Natural Gas Industry B (Elsevier), 2017.07 – present
- **Managing Guest Editor**: Special issue on Gas Hydrates and Applications in the Journal of Natural Gas Science and Engineering to honor Professor Raj Bishnoi (University of Calgary); Editors: Professors Peter Englezos (UBC Canada), Praveen Linga (NUS Singapore) & Matthew Clarke (U Calgary), 2016

RESEARCH AREAS

- Gas hydrates or clathrate hydrates
- Carbon dioxide capture and sequestration
- Energy recovery from unconventional fuels
- Seawater desalination
- Storage and transport of fuels
- District and data-centre cooling
- Optimization and parameter estimation

RESEARCH IMPACT & VISIBILITY

For details, visit: www.gashydrates.chbe.nus.edu.sg/3_p.html

- Three "***Applied Energy Best Paper Award***", received in 2016, 2017 and 2018
- Seventeen publications listed as "***Highly Cited Paper***" in Essential Science Indicators by Clarivate Analytics (formerly Thomson Reuters). This represents the top 1% globally in the field for the publication year.
- Five publications listed as "***Hot Paper***" in Essential Science Indicators by Clarivate Analytics (formerly Thomson Reuters). This represents the top 0.1% globally in the field within first two years of publication.
- Eight publications have received "***Most Cited Paper***" recognitions from the journal representing to top 25 most cited over a five-year period in the journal.
- Research on hydrate-based carbon capture highlighted in ***MIT report*** by Herzog et al. (2009) in advanced post combustion capture process.
- **Citation Metrics:** ***Citations: 5400^{+}; h-index: 39; i100-index: 17; i50-index: 34; i10-index: 82***

RESEARCH IN THE NEWS

- Outreach programme on methane hydrates in China's CCTV, conducted in Qingdao 2018
- Quoted by Channel News Asia Insider in an article "Stepping on the gas to keep Singapore's lights burning"
- Linga Lab research featured in a Channel News Asia special programme "Powering the Future – Keeping Cool with LNG"
- Invited to contribute an opinion article on Natural Gas in Straits Times "Eco friendly ways to harness natural gas efficiently"
- Interviewed by The National for an expert opinion on natural gas hydrates
- Interviewed by BBC News for an expert opinion on natural gas hydrates
- Interviewed by The World Weekly for an expert opinion on natural gas hydrates
- My project on SNG technology for natural gas storage has been highlighted in news: Special mention in EMA Facebook page, Straits Times, Lianhe Zaobao, NUS FoE News and NUS FoE Research News, Channel News Asia.
- Publication [Chem Eng J (2016) 290, 161-173] was highlighted in Science Last Fortnight News.
- Institution of Engineers Australia has highlighted our project under the tagline "drinkable water from cold energy"
- My hydrate based desalination project utilizing LNG cold energy featured in Gastech News, NUS FoE Research News and Business Times.
- Prof. Linga was invited to write an article on natural gas hydrates for Gastech News (a leading news portal for natural gas)

- Publication [Energy (2013) 50, 364-373] was highlighted by Elsevier in a virtual special issue on "Chemistry and Materials for Energy".

RESEARCH GRANTS

Key facts: Secured research funds to the tune of S$9.95 million (~USD$7.4 million)

2019 Industry Project on CO_2 Sequestration, ExxonMobil, Principal Investigator (2019.01 to 2020.12)

2018 Semiclathrates as Thermal Energy Carrier & Storage for District Cooling Systems, MOE TIER 1, SGD$150,527, Principal Investigator (2018.01 to 2021.02)

2016 A Cost-Effective Solidified Natural Gas (SNG) Technology for Energy Storage to Strengthen Energy Resilience in Singapore, Lloyd's Register Global Technology Centre Pte Ltd, SGD$250,000, Principal Investigator (2016.06 to 2019.05)

2016 A Cost-Effective Solidified Natural Gas (SNG) Technology for Energy Storage to Strengthen Energy Resilience in Singapore, Energy Market Authority Office, National Research Foundation, SGD$1.8 million, Principal Investigator (2016.06 to 2019.05)

2016 Understanding the behavior of methane hydrate formation and dissociation, Lloyd's Register Global Technology Centre Pte Ltd, SGD$100,000, Principal Investigator (2016.01 to 2019.12)

2016 LNG Cold Energy Utilization to Desalinate Seawater Employing the Hydrate Based Desalination (HBD) Process, BG Group, SGD$120,000, Principal Investigator (2016.01 to 2019.01)

2015 LNG Cold Energy Utilization to Desalinate Seawater Employing the Hydrate Based Desalination (HBD) Process, Energy Market Authority Office, National Research Foundation, SGD$1.37 million, Principal Investigator (2015.08 to 2019.01)

2015 Energy minimization at the SLNG regasification terminal: Boil-off gas management and process integration, Energy Market Authority Office, National Research Foundation, SGD$1.08 million, Co-Principal Investigator (2015.08 to 2018.07)

2014 Natural Gas Center: Preparing Singapore for the emerging global natural gas economy, National University of Singapore, University Strategic Funding, SGD$3.97 million, Co-Principal Investigator (2014.09 to 2017.08); Project Lead for Natural Gas Hydrates

2014 Methane production from natural gas hydrates via carbon dioxide fixation, National University of Singapore, Faculty Strategic Funding, SGD$233,642, Principal Investigator (2014.04 to 2016.03)

2013 CO_2 Utilization by catalytic hydrogenation with solar hydrogen: from molecules to reactors, National University of Singapore, SGD$38,000, Co-Principal Investigator (2013.05 to 2014.04)

2013 CO_2 Sequestration and CH_4 production from naturally occurring hydrate deposits, MOE TIER 1, SGD$173,903, Principal Investigator (2013.03 to 2016.02)

2012 Production and site investigation of natural gas hydrates, CORE at the National University of Singapore, SGD$150,000, Co-Principal Investigator (2012.02 to 2015.01)

2010 Pre-combustion capture of carbon dioxide based on gas hydrate formation, MOE TIER 1, SGD$179,937, Principal Investigator (2010.08 to 2013.07)

JOURNAL PUBLICATIONS (PEER-REVIEWED)

ORCiD: http://orcid.org/0000-0002-1466-038X
Scopus: http://www.scopus.com/authid/detail.url?authorId=14035921700

Google Scholar: http://scholar.google.com.sg/citations?user=6NpSa1kAAAAJ&hl=en
*corresponding author

(J99) Kumar, A.; Kumar, R.; Linga, P.*; Sodium dodecyl sulfate preferentially promotes enclathration of methane in mixed methane-tetrahydrofuran hydrates. *iScience* **2019**, in press.

(J98) Khurana, M.; Veluswamy, H. P.; Daraboina, N.*; Linga, P.*; Thermodynamic and kinetic modelling of mixed CH4-THF hydrate for methane storage application. *Chemical Engineering Journal* **2019**, in press. doi:10.1016/j.cej.2019.03.172

(J97) Nambiar, A.; Babu, P.*; Linga, P.*; Improved kinetics and water recovery with propane as co-guest gas on the hydrate based desalination (HyDesal) process. *ChemEngineering* **2019**, 3 (1), 31. doi:10.3390/chemengineering3010031
[Invited submission for Dr Babu in lieu his 2018 ChemEngineering travel award]

(J96) Yin, Z.; Linga, P.*; Methane hydrates: A future clean energy resource. *Chinese Journal of Chemical Engineering* **2019**, in press. doi:10.1016/j.cjche.2019.01.005
[Invited Submission for a special issue on Natural Gas Hydrates]

(J95) He, T.*; Chong, Z. R.; Zheng, J.; Ju, Y.; Linga, P.*; LNG Cold Energy Utilization: Prospects and Challenges. *Energy* **2019**, 170, 557-568. doi:10.1016/j.energy.2018.12.170
[Invited Review]

(J94) Pandey, G.; Bhattacharjee, G.; Veluswamy, H.P.; Kumar, R; Sangwai, J.; Linga, P.*; Alleviation of foam formation in a surfactant driven gas hydrate system: Insights via a detailed morphological study. *ACS Applied Energy Materials* **2018**, 1 (12), 6899-6911. doi: 10.1021/acsaem.8b01307

(J93) Kumar, A.; Veluswamy, H.P.; Kumar, R*; Linga, P.*; Direct use of seawater for rapid methane storage via clathrate (sII) hydrates. *Applied Energy* **2019**, 235, 6984-6994. doi:10.1016/j.apenergy.2018.10.085

(J92) Kumar, A.; Veluswamy, H.P.; Linga, P.*; Kumar, R*; Molecular level investigations and stability analysis of mixed methane-tetrahydrofuran hydrates: Implications to energy storage. *Fuel* **2019**, 236, 1505-1511. doi:10.1016/j.fuel.2018.09.126

(J91) Kim, H.; Veluswamy, H.P.; Seo, Y.*; Linga, P.*; Morphology study on the effect of thermodynamic inhibitors during methane hydrate formation in presence of NaCl *Crystal Growth & Design* **2018**, 18 (11), 6984-6994. doi:10.1021/acs.cgd.8b01161

(J90) Yin, Z.; Moridis, G.*; Chong, Z. R.; Tan, H. K.; Linga, P.*; Numerical analysis of experimental studies of methane hydrate dissociation induced by depressurization in a sandy porous medium. *Applied Energy* **2018**, 230, 444-459. doi:10.1016/j.apenergy.2018.08.115

(J89) Chong, Z. R.; Moh, J. W. R..; Yin, Z.; Zhao, J.*; Linga, P.*; Effect of vertical wellbore incorporation on energy recovery from aqueous rich hydrate sediments. *Applied Energy* **2018**, 229, 637-647. doi:10.1016/j.apenergy.2018.08.020

(J88) Zheng, J.; Zhang, B.Y.; Wu, Q.; Linga, P.*; Kinetic evaluation of cyclopentane as a promoter for CO2 capture via clathrate process employing different contact modes. *ACS Sustainable Chemistry & Engineering* **2018**, 6 (9), 11913–11921. doi:10.1021/acssuschemeng.8b02187

(J87) Babu, P.; Nambiar, A.; He, T.; Karimi, I.A.; Lee, J. D.; Englezos, P.*; Linga, P.*; A review of clathrate hydrate based desalination to strengthen energy-water nexus. *ACS Sustainable Chemistry & Engineering* **2018**, 6 (7), 8093-8107. doi:10.1021/acssuschemeng.8b01616

(J86) He, T.; Nair, S. K.; Babu, P.; Linga, P.*; Karimi, I.A.* A novel conceptual design of hydrate based desalination (HyDesal) process by utilizing LNG cold energy. *Applied Energy* **2018**, 222, 13-24. doi:10.1016/j.apenergy.2018.04.006

(J85) Yin, Z.; Moridis, G.*; Tan, H. K.; Linga, P.*; Numerical analysis of experimental studies of methane hydrate formation in a sandy porous medium. *Applied Energy* **2018**, 220, 681-704. doi:10.1016/j.apenergy.2018.03.075
[Highlighted in Science Trends]

(J84) Zheng, J.; Bhatnagar, K.; Khurana, M.; Zhang, P.; Zhang, B.Y*; Linga, P.*; Semiclathrate based CO_2 capture from fuel gas mixture at ambient temperature: Effect of concentrations of tetra-n-butylammonium fluoride (TBAF) and kinetic additives *Applied Energy* **2018**, 217, 377-389. doi:10.1016/j.apenergy.2018.02.133
[Invited submission for a special issue for CUE 2017 conference; Highlighted in Science Trends]

(J83) Veluswamy, H. P.; Kumar, A.; Seo, Y.; Lee, J. D.; Linga, P.*; A review of solidified natural gas (SNG) technology for gas storage via clathrate hydrates. *Applied Energy* **2018**, 216, 262-285. doi:10.1016/j.apenergy.2018.02.059
[Invited submission featured under a special section "Progress in Applied Energy"]

(J82) Lin, Y.; Veluswamy, H. P.*; Linga, P.*; Effect of eco-friendly cyclodextrin on the kinetics of mixed methane-tetrahydrofuran hydrate formation. *Industrial & Engineering Chemistry Research* **2018**, 57 (17), 5944-5950. doi:10.1021/acs.iecr.7b05107
[Invited submission for a special issue "PSE Advances in Natural Gas Value Chain"]

(J81) Chong, Z. R.; Zhao, J.*; Chan, J. H. R.; Yin, Z.; Linga, P.*; Effect of horizontal wellbore on the production behaviour from marine hydrate bearing sediment. *Applied Energy* **2018**, 214, 117-130. doi:10.1016/j.apenergy.2018.01.072
[Invited submission for a special issue for CUE 2017 conference]

(J80) Yin, Z.; Khurana, M.; Tan, H.K.; Linga, P.*; A review of gas hydrate growth kinetic models *Chemical Engineering Journal* **2018**, 342, 9-29. doi:10.1016/j.cej.2018.01.120
[Invited Review]

(J79) Too, J. L.; Cheng, A.; Khoo, B. C.; Palmer, A.; Linga, P.*; Hydraulic fracturing in a penny-shaped crack. Part II: Testing the frackability of methane hydrate-bearing sand. *Journal of Natural Gas Science and Engineering* **2018**, 52, 619-628. doi:10.1016/j.jngse.2018.01.046

(J78) Too, J. L.; Cheng, A.; Khoo, B. C.; Palmer, A.; Linga, P.*; Hydraulic fracturing in a penny-shaped crack. Part I: Methodology and testing of frozen sand. *Journal of Natural Gas Science and Engineering* **2018**, 52, 609-618. doi:10.1016/j.jngse.2017.12.022

(J77) Yin, Z.; Moridis, G.*; Chong, Z. R.; Tan, H. K.; Linga, P.*; Numerical analysis of experiments on thermally-induced dissociation of methane hydrates in porous media. *Industrial and Engineering Chemistry Research* **2018**, 57 (17), 5776-5791. doi:10.1021/acs.iecr.7b03256
[Invited submission for a special issue "PSE Advances in Natural Gas Value Chain"]

(J76) Kumar, A.; Vedula, S. S.; Kumar, R.; Linga, P.*; Hydrate phase equilibrium data of mixed methane-tetrahydrofuran hydrates in saline water. *Journal of Chemical Thermodynamics* **2018**, 117, 2-8. doi:10.1016/j.jct.2017.05.014
[Invited submission for a special issue "Gas Hydrates"]

(J75) Khurana, M.; Yin, Z.; Linga, P.*; A review of clathrate hydrate nucleation *ACS Sustainable Chemistry and Engineering* **2017**, 5 (12), 11176-11203. doi:10.1021/acssuschemeng.7b03238

(J74) He, Z.; Linga, P.; Jiang, J.*; CH_4 hydrate formation between silica and graphite surfaces: Insights from microsecond molecular dynamics simulations *Langmuir* **2017**, 33 (43), 11956-11967. doi:10.1021/acs.langmuir.7b02711

(J73) Veluswamy, H. P.; Kumar, A.; Premasinghe, K.; Linga, P.*; Effect of guest gas on the mixed tetrahydrofuran hydrate kinetics in a quiescent system. *Applied Energy* **2017**, 207, 573-583. doi:10.1016/j.apenergy.2017.06.101
[Invited submission for a special issue on International Conference on Applied Energy ICAE2016]

(J72) Veluswamy, H. P.; Lee, P. Y.; Premesinghe, K.; Linga, P.*; Effect of bio-friendly amino acids on the kinetics of methane hydrate formation and dissociation. *Industrial and Engineering Chemistry Research* **2017**, 56 (21), 6145-6154. doi:10.1021/acs.iecr.7b00427
[Invited submission for a special issue "2017 Class of Influential Researchers"]

(J71) He, Z.; Linga, P.; Jiang, J.*; What are the key factors governing the nucleation of CO2 hydrate? *Physical Chemistry Chemical Physics* **2017**, 19, 15657-15661. doi:10.1039/c7cp01350g

(J70) Chong, Z. R.; Yin, Z.; Tan, J. H. C.; Linga, P.*; Experimental investigations on energy recovery from water-saturated hydrate bearing sediments via depressurization approach. *Applied Energy* **2017**, 204, 1513-1525. doi:10.1016/j.apenergy.2017.04.031
[Invited submission for a special issue on International Conference on Applied Energy ICAE2016]

(J69) Chong, Z. R.; Koh, J. W.; Linga, P.*; Effect of KCl and $MgCl_2$ on the kinetics of methane hydrate formation and dissociation in sandy sediments. *Energy* **2017**, 137, 518-529. doi:10.1016/j.energy.2017.01.154
[Invited submission for a special issue on Sustainable Energy Technologies (SET2016) conference]

(J68) Pandey, G.; Linga, P.; Sangwai, J.* High pressure rheology of gas hydrate formed from multiphase systems using modified couette rheometer *Review of Scientific Instruments* **2017**, 88 (2), article no: 025102. doi:10.1063/1.4974750

(J67) Veluswamy, H. P.; Kumar, A.; Kumar, R.; Linga, P.* An innovative approach to enhance methane hydrate formation kinetics with leucine for energy storage application *Applied Energy* **2017**, 188, 190-199. doi:10.1016/j.apenergy.2016.12.002
[Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)

(J66) Linga, P.; Clarke, M.A.*; A review of reactor designs and materials employed for increasing the rate of gas hydrate formation *Energy and Fuels* **2017**, 31 (1), 1-13. doi:10.1021/acs.energyfuels.6b02304
[Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)]

(J65) Yang, M.; Chong, Z. R.; Zheng, J.; Song, Y.*; Linga, P.*; Advances in nuclear magnetic resonance (NMR) techniques for the investigation of clathrate hydrates *Renewable and Sustainable Energy Reviews* **2017**, 74, 1346-1360. doi:10.1016/j.rser.2016.11.161

(J64) Zheng, J.; Zhang, P.; Linga, P.*; Semiclathrate hydrate process for pre-combustion capture of CO_2 at near ambient temperatures *Applied Energy* **2017**, 194, 267-278. doi:10.1016/j.apenergy.2016.10.118

[Invited submission for a special issue on Sustainable Energy Technologies (SET2016) conference; Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)]

(J63) Kumar, A.; Daraboina, N.; Kumar, R.; Linga, P.* Experimental investigation to elucidate why tetrahydrofuran rapidly promotes methane hydrate formation kinetics: Applicable to energy storage *Journal of Physical Chemistry C* **2016**, 120 (51), 29062-29068. doi:10.1021/acs.jpcc.6b11995

(J62) He, Z.; Gupta, K.; Linga, P.; Jiang, J.*; Molecular insights into the crystal nucleation and growth of CH_4 and CO_2 mixed hydrates from microsecond simulations *Journal of Physical Chemistry C* **2016**, 120 (44), 25225-25326. doi:10.1021/acs.jpcc.6b07780

(J61) Veluswamy, H. P.; Kumar, S.; Kumar, R.; Rangsunvigit, P.; Linga, P.*; Morphology study of methane hydrate formation and dissociation in the presence of amino acid. *Crystal Growth & Design* **2016**, 16(10), 5932-5945. doi:10.1021/acs.cgd.6b00997

(J60) Veluswamy, H. P.; Kumar, S.; Kumar, R.; Rangsunvigit, P.; Linga, P.*; Enhanced clathrate hydrate formation kinetics at near ambient temperatures and moderate pressures: Application to natural gas storage. *Fuel* **2016**, 182, 907-919. doi:10.1016/j.fuel.2016.05.068

[Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)]

(J59) Chong, Z. R.; Pujar, G. A.; Yang, M.*; Linga, P.*; Methane hydrate formation in excess water simulating marine locations and the impact of thermal stimulation on energy recovery. *Applied Energy* **2016**, 177, 409-421. doi:10.1016/j.apenergy.2016.05.077

(J58) Yin, Z.; Chong, Z. R.; Tan, H. K.; Linga, P.*; Review of gas hydrate dissociation kinetic models for energy recovery. *Journal of Natural Gas Science and Engineering* **2016**, 35, 1362-1387. doi:10.1016/j.jngse.2016.04.050

[Invited submission for a special issue on "Gas Hydrates and Applications" to honor Professor Raj Bishnoi of the University of Calgary]

(J57) Zheng, J.; Babu, P.; Zhang, P.; Linga, P.*; Impact of fixed bed reactor orientation, liquid saturation, bed volume and temperature on the clathrate hydrate process for pre-combustion carbon capture. *Journal of Natural Gas Science and Engineering* **2016**, 35, 1499-1510. doi:10.1016/j.jngse.2016.03.100

[Invited submission for a special issue on "Gas Hydrates and Applications" to honor Professor Raj Bishnoi of the University of Calgary]

(J56) Kumar, A.; Kushwaha, O. S.; Rangsunvigit, P.; Linga, P.; Kumar, R.*; Effect of additives on formation and decomposition kinetics of methane clathrate hydrates: Application in energy storage and transportation. *Canadian Journal of Chemical Engineering* **2016**, 94 (11), 2160-2167. doi:10.1002/cjce.22583

[Invited submission for a special issue on CSChE 2015 Conference]

(J55) Veluswamy, H. P.; Prasad, P. S. R.; Linga, P.*, Mechanism of methane hydrate formation in the presence of hollow silica. *Korean Journal of Chemical Engineering* **2016**, 33 (7), 2050-2062. doi:10.1007/s11814-016-0039-0

[Invited submission for a special issue dedicated to Professor Huen Lee of KAIST South Korea]

(J54) Veluswamy, H. P.; Wong, A. J. H.; Babu, P.; Kumar, R.; Kulprathipanja, S.; Rangsunvigit, P.; Linga, P.*, Rapid methane hydrate formation to develop a cost effective large scale energy storage system. *Chemical Engineering Journal* **2016**, 290, 161-173. doi:10.1016/j.cej.2016.01.026
[Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)]

(J53) Chong, Z. R.; Yang, M.; Khoo, B. C.; Linga, P.*, Size effect of porous media on methane hydrate formation and dissociation in an excess gas environment. *Industrial & Engineering Chemistry Research* **2016**, 55 (29), 7981-7991. doi:10.1021/acs.iecr.5b03908
[Invited submission for a special issue on ICCDU 2015 Conference]

(J52) Babu, P.; Ong, H. W. N.; Linga, P.*, A systematic kinetic study to evaluate the effect of tetrahydrofuran on the clathrate process for pre-combustion capture of carbon dioxide. *Energy* **2016**, 94, 431-442. doi:10.1016/j.energy.2015.11.009

(J51) Chong, Z. R.; Yang, S. H. B.; Babu, P.; Linga, P.*; Li, X.-S.*, Review of natural gas hydrates as an energy resource: Prospects and Challenges. *Applied Energy* **2016**, 162, 1633-1652. doi:10.1016/j.apenergy.2014.12.061
[Invited Review submission for a special issue for International Conference on Applied Energy (ICAE2014); Most downloaded applied energy article; Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators by Clarivate Analytics (formerly Thomson Reuters); Listed as a "*Hot Paper*" by Essential Science Indicators (Top 0.1% in Engineering) of Clarivate Analytics (formerly Thomson Reuters); "*Most Cited Paper*" award in 2018 (this constitutes the top 25 of 7000+ publications in the journal from 2013-2017); "*2016 Applied Energy Award*"]

(J50) Yang, S. H. B.; Babu, P.; Chua, S. F. S.; Linga, P.*, Carbon dioxide hydrate kinetics in porous media with and without salts. *Applied Energy* **2016**, 162, 1131-1140. doi:10.1016/j.apenergy.2014.11.052
[Invited Review submission for a special issue for International Conference on Applied Energy (ICAE2014); Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators by Clarivate Analytics (formerly Thomson Reuters); Listed as a "*Hot Paper*" by Essential Science Indicators (Top 0.1% in Engineering) of Clarivate Analytics (formerly Thomson Reuters)]

(J49) Babu, P.; Paricaud, P.; Linga, P.*, Experimental measurements and modeling of the dissociation conditions of semiclathrate hydrates of tetrabutyl ammonium nitrate and carbon dioxide. *Fluid Phase Equilibria* **2016**, 413, 80-85. doi:10.1016/j.fluid.2015.08.034
[Invited submission for a special issue on "Gas Hydrates and Semiclathrate Hydrates"]

(J48) Chong, Z. R.; Chan, A. H. M.; Babu, P.; Yang, M.; Linga, P.*, Influence of NaCl on methane hydrate formation and dissociation in porous media. *Journal of Natural Gas Science and Engineering* **2015**, 27,178-189. doi:10.1016/j.jngse.2015.08.055

(J47) Lee, J.-M.; Cho, S.-J.; Lee, J.-D.*; Linga, P.*; Kang, K.-C.; Lee, J., New insights on the kinetics of methane hydrate formation in a stirred tank reactor coupled with in-situ Raman spectroscopy. *Energy Technology* **2015**, 3 (9), 925-934. doi:10.1002/ente.201500066

[Highlighted by *www.spectroscopynow.com*]

(J46) Veluswamy, H. P.; Ang, W. J.; Zhao, D.; Linga, P.*, Influence of cationic and non-ionic surfactants on the kinetics of mixed hydrogen/tetrahydrofuran hydrates. *Chemical Engineering Science* **2015**, 132, 186-199. doi:10.1016/j.ces.2015.03.061

(J45) Babu, P.; Linga, P.*; Kumar, R.*; Englezos, P.*, A review of the hydrate based gas separation (HBGS) process for carbon dioxide pre-combustion capture. *Energy* **2015**, 85, 261-279. doi:10.1016/j.energy.2015.03.103

[Invited Review; Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); Listed as a "*Hot Paper*" by Essential Science Indicators (top 0.1% in Engineering) of Clarivate Analytics (formerly Thomson Reuters); "*Most Cited Paper*" in 2018 (this constitutes the top 25 of 6000+ publications in the journal from 2013-2017)]

(J44) Nambiar, A.; Babu, P.; Linga, P.*, CO_2 capture using the clathrate hydrate process employing cellulose foam as a porous media. *Canadian Journal of Chemistry* **2015**, 93 (8), 808-814. doi:10.1139/cjc-2014-0547
[Invited submission for a special issue dedicated to Dr. John Ripmeester of National Research Council Canada]

(J43) Veluswamy, H. P.; Chen, J. Y.; Linga, P.*, Surfactant effect on the kinetics of mixed hydrogen/propane hydrate formation for hydrogen storage as clathrates. *Chemical Engineering Science* **2015**, 126, 488-499. doi:10.1016/j.ces.2014.12.052

(J42) Siangsai, A.; Rangsunwigit P.*; Kitiyanan, B.; Kulaprathipanja, S.; Linga, P., Investigation on the Roles of Activated Carbon Particle Sizes on Methane Hydrate Formation and Dissociation. *Chemical Engineering Science* **2015**, 126, 383-389. doi:10.1016/j.ces.2014.12.047

(J41) Loh, M.*; Too, J. L.; Falser, S.; Linga, P.; Khoo, B. C.; Palmer, A., Gas production from methane hydrates in a dual wellbore system. *Energy & Fuels* **2015**, 29 (1), 35-42. doi:10.1021/ef501769r

(J40) Veluswamy, H. P.; Yew, J. C.; Linga, P.*, New hydrate phase equilibrium data for two binary gas mixtures of hydrogen and propane coupled with kinetic study. *Journal of Chemical & Engineering Data* **2015**, 60 (2), 228-137. doi:10.1021/je500489d
[Invited submission for a special issue on gas hydrates, dedicated to Professor E. Dendy Sloan's 70th birthday]

(J39) Kumar, A.; Sakpal, T.; Linga, P.; Kumar, R.*, Enhanced Carbon Dioxide Hydrate Formation Kinetics in a Fixed Bed Reactor Filled with Metallic Packing. *Chemical Engineering Science* **2015**, 122, 78-85. doi:10.1016/j.ces.2014.09.019

(J38) Babu, P.; Datta, S.; Kumar, R.; Linga, P.*, Impact of experimental pressure and temperature on semiclathrate hydrate formation for pre-combustion capture of CO_2 using tetra-n-butyl ammonium nitrate. *Energy* **2014**, 78, 458-464. doi:10.1016/j.energy.2014.10.033

(J37) Kang, K. C.; Linga, P.; Park, K.-N.; Choi, S.-J.; Lee, J.-D.*, Seawater desalination by gas hydrate process and removal characteristics of dissolved ions (Na^+, K^+, Mg^{2+}, Ca^{2+}, B^{3+}, Cl^-, SO_4^{2-}). *Desalination* **2014**, 353, 84-90. doi:10.1016/j.desal.2014.09.007

["*Most Cited Paper*" in 2019 (this constitutes the top 25 most cited of 2000+ publications in the journal from 2014-2018)]

(J36) Babu, P.; Kumar, R.; Linga, P.*, Unusual behavior of propane as a co-guest during hydrate formation in silica sand: Potential application to seawater desalination and carbon dioxide capture. *Chemical Engineering Science* **2014**, 117, 342-351. doi:10.1016/j.ces.2014.06.044

(J35) Kumar, A.; Sakpal, T.; Linga, P.; Kumar, R.*, Impact of Fly Ash Impurity on the Hydrate Based Gas Separation Process for Carbon Dioxide Capture from a Flue Gas Mixture. *Industrial & Engineering Chemistry Research* **2014**, 53 (23), 9849-9859. doi:10.1021/ie5001955

(J34) Babu, P.; Ho, C. Y.; Kumar, R.; Linga, P.*, Enhanced kinetics for the clathrate process in a fixed bed reactor in the presence of liquid additives for pre-combustion carbon dioxide capture. *Energy* **2014**, 70, 664-673. doi:10.1016/j.energy.2014.04.053

(J33) Veluswamy, H. P.; Yang, T.; Linga, P.*, Crystal growth of hydrogen/tetra-n-butylammonium bromide semiclathrates based on morphology study. *Crystal Growth & Design* **2014**, 14 (4), 1950-1960. doi:10.1021/cg500074c

(J32) Mekala, P.; Babu, P.; Sangwai, J.*; Linga, P.*, Formation and Dissociation Kinetics of Methane Hydrates in Seawater and Silica Sand. *Energy & Fuels* **2014**, 28 (4), 2708-2716. doi:10.1021/ef402445k

(J31) Babu, P.; Chin, W. I.; Kumar, R.; Linga, P.*, Systematic evaluation of tetra-n-butyl ammonium bromide (TBAB) for carbon dioxide capture employing the clathrate process. *Industrial & Engineering Chemistry Research* **2014**, 53 (12), 4878-4887. doi:10.1021/ie4043714

(J30) Babu, P.; Yao, M.; Datta, S.; Kumar, R.; Linga, P.*, Thermodynamic and kinetic verification of tetra-n-butyl ammonium nitrate ($TBANO_3$) as a promoter for the clathrate process applicable to pre-combustion carbon dioxide capture. *Environmental Science & Technology* **2014**, 48 (6), 3550-3558. doi:10.1021/es4044819

(J29) Veluswamy, H. P.; Kumar, R.*; Linga, P.*, Hydrogen storage in clathrate hydrates: Current state of the art and future directions. *Applied Energy* **2014**, 122, 112-132. doi:10.1016/j.apenergy.2014.01.063
[Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); Listed as a "*Hot Paper*" (top 0.1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); "*2015 Applied Energy Award*"; Highlighted by REGInnovations as a key scientific article]

(J28) Veluswamy, H. P.; Chin, W. I.; Linga, P.*, Clathrate hydrates for hydrogen storage: The impact of tetrahydrofuran, tetra-n-butylammonium bromide and cyclopentane as promoters on the macroscopic kinetics. *International Journal of Hydrogen Energy* **2014**, 39 (28), 16234-16243. doi:10.1016/j.ijhydene.2014.01.054

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(J26) Ho, L. C.; Babu, P.; Kumar, R.; Linga, P.*, HBGS (hydrate based gas separation) process for carbon dioxide capture employing an unstirred reactor with cyclopentane. *Energy* **2013**, 63, 252-259. doi:10.1016/j.energy.2013.10.031
[Listed as a "*Highly Cited Paper*" (top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)]

(J25) Babu, P.; Kumar, R.; Linga, P.*, Medium pressure hydrate based gas separation (HBGS) process for pre-combustion capture of carbon dioxide employing a novel fixed bed reactor. *International Journal of Greenhouse Gas Control* **2013**, 17, (5), 206-214. doi:10.1016/j.ijggc.2013.05.010
[Listed as a "*Highly Cited Paper*" (Top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); Listed as a "*Hot Paper*" (top 0.1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); "*Most Cited Paper*" award in 2018 (2013-2017), in 2017 (2012-2017) (this constitutes the top 25 of 1600+ publications in the journal for the five year period)]

(J24) Babu, P.; Yee, D.; Linga, P.*; Palmer, A.; Khoo, B. C.; Tan, T. S.; Rangsunwigit, P., Morphology of methane hydrate formation in porous media. *Energy & Fuels* **2013**, 27, (6), 3364-3372. doi:10.1021/ef4004818

(J23) Lim, Y.-A.; Babu, P.; Kumar, R.; Linga, P.*, Morphology of Carbon Dioxide–Hydrogen–Cyclopentane Hydrates with or without Sodium Dodecyl Sulfate. *Crystal Growth & Design* **2013**, 13, (5), 4587-4596. doi:10.1021/cg400118p

(J22) Babu, P.; Yang, T.; Veluswamy, H. P.; Kumar, R.; Linga, P.*, Hydrate phase equilibrium of ternary gas mixtures containing carbon dioxide, hydrogen and propane. *Journal of Chemical Thermodynamics* **2013**, 61, 58-63. doi:10.1016/j.jct.2013.02.003

(J21) Daraboina, N.; Linga, P.*, Experimental investigation of the effect of poly-N-vinyl pyrrolidone (PVP) on methane/propane clathrates using a new contact mode. *Chemical Engineering Science* **2013**, 93, 387-394. doi:10.1016/j.ces.2013.02.011

(J20) Veluswamy, H. P.; Linga, P.*, Macroscopic Kinetics of hydrate formation of mixed hydrates of hydrogen/tetrahydrofuran for hydrogen storage. *International Journal of Hydrogen Energy* **2013**, 38, (11), 4587–4596. doi:10.1016/j.ijhydene.2013.01.123
[Listed as a "*Highly Cited Paper*" (Top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)].

(J19) Babu, P.; Kumar, R.; Linga, P.*, Pre-combustion capture of carbon dioxide in a fixed bed reactor using the clathrate hydrate process. *Energy* **2013**, 50, 364-373. doi:10.1016/j.energy.2012.10.046
[Listed as a "*Highly Cited Paper*" (Top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); Listed as a *"Hot Paper"* (top 0.1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); "*Most Cited Paper*" award in 2018 (2013-2017) and in 2017 (2012-2016) (this represents top 25 among 6000+ publications in the journal for the five year period); Highlighted by Elsevier in a virtual special issue on "*Chemistry and Materials for Energy*".

(J18) Kumar, A.; Sakpal, T.; Linga, P.; Kumar, R.*, Influence of contact medium and surfactants on carbon dioxide clathrate hydrate kinetics. *Fuel* **2013**, 105, (3), 664-671. doi:10.1016/j.fuel.2012.10.031
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(J17) Kanagasabapathy, M.*; Ramesh Bapu, G. N. K.; Linga, P.; Gnanamuthu, R. M. Numerical Modeling on Non-enzymatic, Potentiometric Glucose Sensor. *Portugaliae Electrochimica Acta* **2012**, 30 (4), 294-306. doi:10.4152/pea.201204295

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(J15) Linga, P.; Daraboina, N.; Ripmeester, J. A.; Englezos, P.*, Enhanced rate of gas hydrate formation in a fixed bed column filled with sand compared to a stirred vessel. *Chemical Engineering Science* **2012**, 68, (1), 617-623. doi:10.1016/j.ces.2011.10.030
["*Most Cited Paper*" award in 2015 (for 2010-2014), in 2016 (for 2011-2015) & in 2017 (for 2012-2016). This constitutes the top 25 of 4000+ publications in the journal for the five-year period; Contributed to the "*h5 index*" of the journal Google Scholar Metrics in 2015 & 2016].

(J14) Daraboina, N.; Linga, P.; Ripmeester, J.; Walker, V. K.; Englezos, P.*, Natural Gas Hydrate Formation and Decomposition in the Presence of Kinetic Inhibitors. 2. Stirred Reactor Experiments. *Energy & Fuels* **2011**, 25, (10), 4384-4391. doi:10.1021/ef200813v
[Contributed to the "h5 index" of the journal in Google Scholar Metrics in 2016]

(J13) Yoslim, J.; Linga, P.; Englezos, P.*, Enhanced growth of methane – propane clathrate hydrate crystals with sodium dodecyl sulfate, sodium tetradecyl sulfate, and sodium hexadecyl sulfate surfactants. *Journal of Crystal Growth* **2010**, 313, (1), 68-80. doi:10.1016/j.jcrysgro.2010.10.009

(J12) Linga, P.; Kumar, R.; Lee, J. D.; Ripmeester, J. A.; Englezos, P.*, A new large scale apparatus to enhance the rate of gas hydrate formation: application to capture of carbon dioxide. *International Journal of Greenhouse Gas Control* **2010**, 4, (4), 630-637. doi:10.1016/j.ijggc.2009.12.014
["*Most Cited Paper*" award in 2015 (This constitutes the top 25 among 1000+ publications from 2010-2014); Listed as a "*Highly Cited Paper*" (Top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters); Contributed to the "*h5 index*" of the journal in Google Scholar Metrics in 2014].

(J11) Lee, H. J.; Lee, J. D.; Linga, P.; Englezos, P.; Kim, Y. S.; Lee, M. S.; Kim, Y. D.*, Gas hydrate formation process for pre-combustion capture of carbon dioxide. *Energy* **2010**, 35, (6), 2729-2733. doi:10.1016/j.energy.2009.05.026
[Listed as a "*Highly Cited Paper*" (Top 1% in Engineering) by Essential Science Indicators of Clarivate Analytics (formerly Thomson Reuters)]

(J10) Haligva, C.; Linga, P.; Ripmeester, J. A.; Englezos, P.*, Recovery of Methane from a Variable-Volume Bed of Silica Sand/Hydrate by Depressurization. Energy and Fuels **2010**, 24, (5), 2947-2955. doi:10.1021/ef901220m

(J9) Adeyemo, A.; Kumar, R.; Linga, P.; Ripmeester, J.; Englezos, P.*, Capture of CO2 from flue or fuel gas mixtures by clathrate crystallization in a silica gel column. *International Journal of Greenhouse Gas Control* **2010**, 4, (3), 478-485. doi:10.1016/j.ijggc.2009.11.011

(J8) Linga, P.; Haligva, C.; Nam, S.-C.; Ripmeester, J. A.; Englezos, P.*, Recovery of methane from hydrate formed in a variable volume bed of silica sand particles. *Energy & Fuels* **2009**, 23, (11), 5508–5516. doi:10.1021/ef900543v

(J7) Linga, P.; Haligva, C.; Nam, S.-C.; Ripmeester, J. A.; Englezos, P.*, Gas hydrate formation in a variable volume bed of silica sand particles. *Energy & Fuels* **2009**, 23, (11), 5496–5507. doi:10.1021/ef900542m

(J6) Kumar, R.; Linga, P.; Ripmeester, J., A.; Englezos, P.*, A two-stage clathrate hydrate/membrane process for pre-combustion capture of carbon dioxide and hydrogen. Journal of Environmental Engineering **2009**, 135, (6), 411-417. doi:10.1061/(ASCE)EE.1943-7870.0000002
[Contributed to the "*h5 index*" of the journal in Google Scholar Metrics for three consecutive years of 2012, 2013 & 2014].

(J5) Kumar, R.; Linga, P.; Moudrakovski, I.; Ripmeester, J. A.; Englezos, P.*, Structure and kinetics of gas hydrates from methane/ethane/propane mixtures relevant to the design of natural gas hydrate storage and transport facilities. AIChE Journal **2008**, 54, (8), 2132-2144. doi:10.1002/aic.11527
[Contributed to the "*h5 index*" of the journal in Google Scholar Metrics in 2013].

(J4) Linga, P.; Adeyemo, A.; Englezos, P.*, Medium-Pressure Clathrate Hydrate/Membrane Hybrid Process for Postcombustion Capture of Carbon Dioxide. *Environmental Science & Technology* **2008**, 42, (1), 315-320. doi:10.1021/es071824k

(J3) Linga, P.; Kumar, R.; Englezos, P.*, The clathrate hydrate process for post and pre-combustion capture of carbon dioxide. *Journal of Hazardous Materials* **2007**, 149, (3), 625-629.
[Listed as a "*Highly Cited Paper*" by Essential Science Indicators of Thomson Reuters (Top 1% in Engineering); Contributed to the "*h5 index*" of the journal in Google Scholar Metrics in 2012].

(J2) Linga, P.; Kumar, R.; Englezos, P.*, Gas hydrate formation from hydrogen/carbon dioxide and nitrogen/carbon dioxide gas mixtures. *Chemical Engineering Science* **2007**, 62, (16), 4268-4276.
["*Most Cited Paper*" award in 2012 (This constitutes the top 25 among 3000+ publications from 2007-2011); Contributed to the "*h5 index*" of the journal in Google Scholar Metrics in 2012].

(J1) Linga, P.; Al-Saifi, N.; Englezos, P.*, Comparison of the Luus-Jaakola optimization and Gauss-Newton methods for parameter estimation in ordinary differential equation models. *Industrial & Engineering Chemistry Research* **2006**, 45, (13), 4716-4725. doi:10.1021/ie060051q

BOOKS OR BOOK CHAPTERS

(BC2) Kumar R., Linga P. (2018) Gas Hydrates. In: White W.M. (eds) Encyclopedia of Geochemistry. Encyclopedia of Earth Sciences Series. Springer, Cham, Pages: 535-541

(BC1) Zheng J., Babu, P., Linga P. (2016) Thermodynamics and Applications of CO_2 Hydrates. In: Aresta M., Dibenedetto A., Quaranta E. (eds) Reaction Mechanisms in Carbon Dioxide Conversion. Springer, Berlin, Heidelberg, Pages: 373-402

PATENTS AND INVENTION DISCLOSURES

(P1) Linga P., Babu, P., Nambiar, A. (2018) A Clathrate Hydrate Desalination Method (WO/2018/156083).

PROFESIONAL SERVICE

2020 Chair, 10th International Conference on Gas Hydrates (ICGH10), Singapore, June 21 – 26, 2020, Suntec City Conference Centre

2018 Session Chair, International Symposium on In-situ Modification of Deposit Properties for Improving Mining, September 17-19, Taiyuan, China

2018 Session Chair for two sessions, International Conference on Applied Energy (ICAE2018), August 2018, Hong Kong.

2018 Hydrate Youth Forum Organizing Committee Member, 2nd International Deepwater Oil and Gas Engineering Frontier Technology Seminar and International Hydrate Youth Forum, Qingdao, July 26-28, P R China

2018 Session Chair, International Conference on Desalination (InDA2018), India, April 20-21, 2018

2018 Session Chair, Offshore Technology Conference Asia (OTC Asia – 2018), Kuala Lumpur, Malaysia

2018 Programme Committee Member, Society of Mining, Metallurgy and Exploration (SME), Offshore Technology Conference Asia (OTC Asia – 2018), Kuala Lumpur, Malaysia

2017 Coordinator for "Gas Hydrates" joint workshop, 10th World Congress of Chemical Engineering, WCCE10 – 2017, 1 – 5 October, Barcelona, Spain

2017 Session Chair/Co-Chair, 9th International Conference on Gas Hydrates, ICGH9, Denver, June 24-30, USA
2017 Scientific Committee Member, 3rd International Conference on Fluid Flow, Heat and Mass Transfer, FFHMT – 2017, Ottawa, Canada
2016 Secretary and Webmaster, AIChE Singapore Local Section, 2014 – present
2016 Session Chair/Co-chair and Organizer of two sessions on "Gas Hydrates Science and Engineering", AIChE Meeting, November 2016, San Francisco USA.
2016 Scientific Committee Member, Sriwijaya International Conference on Engineering, Science and Technology, SICEST – 2016, Bangka Island, Indonesia
2016 Session Chair, International Conference on Applied Energy (ICAE2016), October 2016, Beijing China. Organized three sessions on "gas hydrates" with Professor Xiaosen Li (CAS-GIEC, China)
2016 Session Chair, Process Systems Engineering Asia (PSE Asia 2016), Tokyo, July 24-27.
2016 Scientific Committee Member and Conference Secretary, 8th Global Chinese Chemical Engineers Symposium, GCCES-8 – 2016, Singapore
2016 Scientific Committee Member and Conference Secretary, 15th International Conference on Sustainable Energy Technologies, SET – 2016, Singapore
2016 Scientific Committee Member, 3rd International Conference on Fluid Flow, Heat and Mass Transfer, FFHMT – 2016, Ottawa, Canada
2015 Technical Program Committee Member, 65th Canadian Society of Chemical Engineering (CSChE) Conference, Calgary, 2015
2015 Session Chair/Co-chair, 65th Canadian Society of Chemical Engineering (CSChE) Conference, Calgary October, 2015
2015 Organized 3 special sessions on "CO_2 hydrates and their applications" in the 8th International Conference on Carbon Dioxide Utilization (ICCDU), July 2015
2015 Local Organizing Committee Member, 8th International Conference on Carbon Dioxide Utilization (ICCDU), July 2015
2015 Scientific Committee Member, 2nd International Conference on Fluid Flow, Heat and Mass Transfer, FFHMT – 2015, Ottawa, Canada
2014 Breakout Session: Conducted a break out discussion session on natural gas hydrate recovery along with Professor Richard Coffin (Texas A&M) and Professor Sudeep Punnathanam (IISc Bangalore India) in the Fiery Ice Workshop in Hyderabad India
2014 Session Chair/Co-Chair, 8th International Conference on Gas Hydrates, ICGH 2014, Beijing, July 28-Aug 01
2014 Session Chair for "Hydrates", In 6th International Conference on Applied Energy, ICAE 2014, Taipei, May 31 - June 2
2014 Scientific Committee Member, New Trends in Transport Phenomena, NTTP – 2014, Ottawa, Canada
2013 Session Chair/Co-Chair, International Conference on Electrochemical Materials and Technologies for Clean Sustainable Energy, CSE 2013, Guangzhou, July 5-9
2012 Local Organizing Committee Member, 11th International Symposium on Process Systems Engineering Conference, July 2012
2012 Co-Guest Editor, 14th Asia Pacific Confederation of Chemical Engineering Congress Conference Proceedings, Singapore, February 21-24
2012 Scientific/Technical Program Committee Member, 14th Asia Pacific Confederation of Chemical Engineering Congress, Singapore, February 21-24

2011 Contributed to the primer, "Carbon Capture and Storage/Utilization Technology Primer: A Summary" for the National Climate Change Secretariat and National Research Foundation

2008 Student Volunteer for the 6th International Conference on Gas Hydrates (ICGH 2008) held in Vancouver (July 2008)

LIST OF CONFERENCES/SEMINARS

Summary: Keynote Talks (KT): 17; Invited Talks (IT): 25; Invited Seminars (IS): 36; Conference Proceedings (CP): 42; Conference Talks (CT): 18

(KT17) **Keynote Speaker** in International Conference on Unconventional Energy Resources (ICUER 2019), RGIPT, Rae Bareli, India, February 28-March 01, 2019.

(KT16) **Keynote Speaker** in 2nd International Conference on Energy and Power (ICEP 2018), Sydney, Australia, December 13-15, 2018.

(KT15) **Keynote Speaker** in the International Conference on Advances and Challenges for Sustainable Ecosystem, December 05-08, Trichy, India, 2018.

(KT14) **Keynote Speaker** in the International Symposium on In-situ Modification of Deposit Properties for Improving Mining, September 17-19, Taiyuan, China, 2018.

(KT13) **Keynote Speaker** in the 2nd International Technical Symposium on Deepwater Oil and Gas Engineering & International Youth Forum on Gas Hydrate, Qingdao China, July 26-28, 2018.

(KT12) **Keynote Speaker** in 24th PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, June 05, 2018.

(KT11) **Keynote Speaker** in International Conference on Desalination (InDA2018), India, April 20-21, 2018.

(KT10) **Keynote Speaker** in World Congress of Chemical Engineering (WCCE10), Barcelona, Spain, October 2, 2017.

(KT9) **Keynote Speaker** in International Workshop on Gas Hydrates, Guangzhou, China, April 10, 2017.

(KT8) **Keynote Speaker** in International Conference on Energy and Power (ICEP 2016), Melbourne, Australia, December 14-16, 2016.

(KT7) **Keynote Speaker** in 2nd International Conference on Harnessing Engineering Technology & Innovation for Sustainable Growth (HETIS 2016), Chandigarh, India, Sep 29th – Oct 1st, 2016.

(KT6) **Keynote Speaker** in Process Systems Engineering Asia (PSE Asia 2016) Conference, Tokyo, Japan, July 24-27, 2016.

(KT5) **Keynote Speaker** in the International Symposium on Coal Mine Disaster Dynamics and Control, Chongqing China, May 27-28, 2016.

(KT4) **Keynote Speaker** in the International Workshop on Future Energy Resources, IWFER 2015, Chennai, India, December 22, 2015.

(KT3) **Keynote Speaker** in 5th Sriwijaya International Seminar on Energy and Environmental Science and Technology, SISEEST 2014, Palembang, Indonesia, September 10, 2014.

(KT2) **Keynote Speaker** in International Conference on Electrochemical Materials and Technologies for Clean Sustainable Energy, CSE 2013, Guangzhou, China, July 9, 2013.

(KT1) **Keynote Speaker** in National Level Seminar on Natural Gas Hydrates, Madurai, India, October 20, 2012.

(IT25) **Invited Speaker,** Society of Petroleum Engineering Singapore Section, Singapore, April 26, 2018.

(IT24) **Invited Speaker,** The First China-Singapore Frontier Technology Innovation Conference, Chongqing, July 16, 2017.

(IT23) **Invited Speaker** in 23rd PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, May 23, 2017.

(IS22) **Invited Speaker**, International Conference on Sustainable Development for Energy and Environment (ICSDEE2017), Pune India, January 17, 2017.

(IS21) **Invited Speaker**, Workshop on Public Understanding of Risk in Asia, Singapore, October 4, 2016.

(IS20) **Invited Speaker**, Keppel-NUS Corporate Laboratory Workshop, Singapore, August 15, 2016.
(IT19) **Invited Speaker** in 22nd PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, May 24, 2016.
(IT18) **Invited Speaker** in Asia Pacific Ceramic Cooperation (APCC) Summit, Singapore, February 29, 2016.
(IT17) **Invited Speaker** in International Conference on Advances in Energy Research (ICAER 2015), Mumbai, December 15-17, 2015.
(IT16) **Invited Speaker** in American Institute of Chemical Engineers (AIChE) Annual Meeting, Salt Lake City USA, November 8-13, 2015.
(IT15) **Invited Speaker** in Canadian Society of Chemical Engineering (CSChE) Conference, Calgary Canada, October 4-7, 2015.
(IT14) **Invited Speaker** in Sustainability, Environment & Energy Research (SEER), NUS Singapore, August 27, 2015.
(IT13) **Invited Speaker** in Technology Sharing Session for Oil & Gas Industry, Singapore, May 19, 2015.
(IT12) **Invited Speaker** in 21st PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, April 21, 2015.
(IS11) **Invited Speaker**, Joint workshop on Energy by NUS-IITB, Singapore, February 25, 2015.
(IT10) **Invited Speaker** in 9th International Workshop on Methane Hydrates Research & Development, Hyderabad, India, November 11, 2014.
(IT9) **Invited Speaker** in 14th CHEMECA conference, Perth, Australia, October 1, 2014.
(IT8) **Invited Speaker** in 20th PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, April 22, 2014.
(IT7) **Invited Speaker** in Chemcon Conference, Mumbai, India, December 29, 2013.
(IT6) **Invited Speaker** in 19th PPC Symposium on Petroleum, Petrochemicals, and Polymers, Bangkok, April 21, 2013.
(IT5) **Invited Speaker** in National Level Seminar on Natural Gas Hydrates, Madurai, India, October 20, 2012.
(IT4) **Invited Speaker** in International Workshop on Natural Gas Hydrates - Exploration and Production, IIT Madras: Madras, India, August 9, 2012.
(IT3) **Invited Speaker** in 14th Asia Pacific Confederation of Chemical Engineering Conference Singapore, February 23, 2012.
(IT2) **Invited Speaker** in International Symposium on Gas Hydrates and its Applications, Ulsan City, Korea, May 15, 2009.
(IT1) **Invited Speaker** in International Conference on Sustainable Petroleum Development, Beijing, China, May 8, 2007.

(IS36) **Invited Seminar**, Department of Mechanical Engineering, National Institute of Technology Trichy (NIT-T), India, December 06, 2018.
(IS35) **Invited Seminar**, Department of Chemical Engineering, China University of Petroleum (CUP Beijing), China, September 20, 2018.
(IS34) **Invited Seminar**, Department of Ocean Engineering, Harbin Engineering University (HEU), China, August 04, 2018.
(IS33) **Invited Seminar**, Department of Mining and Safety Engineering, Heilongjiang University of Science and Technology (HUST), China, August 03, 2018.
(IS32) **Invited Seminar**, Faculty of New Energy and Environment, Jilin University, China, August 01, 2018.
(IS31) **Invited Seminar**, Department of Energy and Power Engineering, Dalian University of Technology (DUT), China, July 30, 2018.
(IS30) **Invited Seminar**, Department of Mechanical Engineering, National Institute of Technology Trichy (NIT-T), India, April 23, 2018.
(IS29) **Invited Seminar**, College of Petroleum and Geosciences, King Fahd University of Petroleum and Minerals (KFUPM), Saudi Arabia, September 20, 2017.
(IS28) **Invited Seminar**, Clean Combustion Research Center, King Abdullah University of Science and Technology (KAUST), Saudi Arabia, September 18, 2017.

(IS27) **Invited Seminar**, Department of Mechanical Engineering, Shanghai Jiao Tong University, China, July 21, 2017.
(IS26) **Invited Seminar**, Key Lab of Gas Hydrate, Qingdao Institute of Marine Geology, China, July 19, 2017.
(IS25) **Invited Seminar**, Department of Power Engineering and State Key Lab of Coal Mine Disaster Dynamics and Control, Chongqing University, China, July 17, 2017.
(IS24) **Invited Seminar**, Department of Chemical Engineering, Indian Institute of Technology-Delhi, India, September 29, 2016.
(IS23) **Invited Seminar**, Department of Mechanical Engineering, Keio University, Japan, June 28, 2016.
(IS22) **Invited Seminar**, Department of Chemical Engineering, National Taiwan University (NTU), Taiwan, June 22, 2016.
(IS21) **Invited Seminar**, Department of Chemical Engineering, National Tsing Hua University (NTHU), Taiwan, June 21, 2016.
(IS20) **Invited Seminar**, Center for Gas Hydrate Research, Guangzhou Institute of Energy Conversion - CAS, Guangzhou, China, June 1, 2016.
(IS19) **Invited Seminar**, Department of Energy Engineering, Dalian University of Technology (DUT) Dalian, China, May 30, 2016.
(IS18) **Invited Seminar**, Department of Chemical Engineering, Universiti Teknologi Petronas (UTP) Ipoh, Malaysia, January 28, 2016.
(IS17) **Invited Seminar**, Department of Chemical Engineering, Sri Ram Engineering College, Chennai, India, January 18, 2016.
(IS16) **Invited Seminar**, Inaugural speaker in the seminar series jointly held by IIChE- Pune chapter and the National Chemical Laboratory in Pune, India, December 18, 2015.
(IS15) **Invited Seminar**, Department of Chemical Engineering, Indian Institute of Technology (IIT) Bombay, December 14, 2015.
(IS14) **Invited Seminar**, Department of Chemical Engineering, Rice University, Houston, November 13, 2015.
(IS13) **Invited Seminar**, Department of Petroleum Engineering, University of Tulsa, Tulsa, November 12, 2015.
(IS12) **Invited Seminar**, Department of Ocean Engineering, Indian Institute of Technology, Madras, July 23, 2015.
(IS11) **Invited Seminar**, Center for Hydrate Research, Colorado School of Mines, Golden, June 22, 2015.
(IS10) **Invited Seminar**, National Geophysical Research Institute (CSIR-NGRI), Hyderabad, February 19, 2015.
(IS9) **Invited Seminar**, Indian Institute of Chemical Technology (CSIR-IICT), Hyderabad, February 19, 2015.
(IS8) **Invited Seminar**, Chinese Academy of Sciences – Institute of Process Engineering (IPE), Beijing, July 31, 2014.
(IS7) **Invited Seminar**, Korea Institute of Industrial Technology (KITECH), South Korea, May 22, 2014.
(IS6) **Invited Seminar**, Korea Advanced Institute of Science and Technology (KAIST), South Korea, May 19, 2014.
(IS5) **Invited Seminar**, National Chemical Laboratory-Pune, India, December 31, 2013.
(IS4) **Invited Seminar**, The University of British Columbia, Vancouver, Canada, 2013.
(IS3) **Invited Seminar**, South China University of Science and Technology, Guangzhou, China, July 11, 2013.
(IS2) **Invited Seminar**, Center for Gas Hydrate Research, Guangzhou Institute of Energy Conversion - CAS, Guangzhou, China, July 10, 2013.
(IS1) **Invited Seminar**, Petroleum and Petrochemical College, Chulalongkorn University, Bangkok, Thailand, January 21, 2013.

(CP42) Kumar, A.; Veluswamy, H. P.; Kumar, R.; Linga, P.*, Kinetic Promotion of Mixed Methane-THF Hydrate by Additives: Opportune to Energy Storage. In 10th International Conference on Applied Energy (ICAE), Hong Kong, 2018. *Proceedings published in Energy Procedia (2019), 158, 5287-5292.*
(CP41) Yin, Z.*; Chong, Z. R.; Linga, P., Effect of Multi-Stage Cooling on the Kinetic Behavior of Methane Hydrate Formation in Sandy Medium. In 10th International Conference on Applied Energy (ICAE), Hong Kong, 2018. *Proceedings published in Energy Procedia (2019), 158, 5374-5381.*

(CP40) Zheng, J.*; Loganathan, N. K.; Linga, P., Natural Gas Storage via Clathrate Hydrate Formation: Effect of Carbon Dioxide and Experimental Conditions. In 10th International Conference on Applied Energy (ICAE), Hong Kong, August 22-25, 2018. *Proceedings published in Energy Procedia (2019), 158, 5535-5540.*

(CP39) Chong, Z. R.*; Yin, Z.; Khoo, B. C.; Linga, P., Enhanced gas recovery from water saturated hydrate bearing sediments using horizontal wellbore. In OTC Asia 2018, Kuala Lumpur, March 20-23, 2018.

(CP38) Yin, Z.*, Moridis, G.; Tan, H. K.; Linga, P., Numerical Modelling of Methane Hydrate Dissociation in Sandy Porous Media by Depressurization with a Parametric Study. In OTC Asia 2018, Kuala Lumpur, March 20-23, 2018.

(CP37) Too, J.L.*; Cheng, A.; Linga, P., Fracturing Methane Hydrate in Sand: A Review of the Current Status. In OTC Asia 2018, Kuala Lumpur, March 20-23, 2018.

(CP36) Yin, Z*, Moridis, G.; Tan, H. K.; Linga, P., Calibration and validation of a numerical model against experimental data of methane hydrate formation in a sandy porous medium. In AGU 2017 Fall Meeting, New Orleans, December 10 – 15, 2017.

(CP35) Chong, Z. R.*, Yin, Z.; Zhao, J.; Linga, P., Recovering natural gas from gas hydrates using horizontal wellbore. In World Engineers Summit - Applied Energy Symposium & Forum: Low Carbon Cities & Urban Energy Joint Conference, Singapore, 19-21 July 2017.

(CP34) Yin, Z.*; Chong, Z. R.; Moridis, G.; Linga, P., Numerical modelling of methane hydrate dissociation by depressurization with a flow regime transition study in a vertical flow line. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25 – 30, 2017.

(CP33) He, Z. J.*; Linga, P.; Jiang, J. W, Molecular Dynamics Study on the Formation of Carbon Dioxide Hydrates from Two-Phase System of Water and Liquid Carbon Dioxide. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP32) He, Z. J.*; Linga, P.; Jiang, J. W, Effects of Silica and Graphite Surfaces on the Formation of CH_4 Hydrates: A Molecular Simulation Study. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP31) Pandey, G*; Nair, V.C.; Linga, P.; Sangwai, J.S. High Pressure Rheological Studies of Methane Hydrate Slurries Formed From Water Hexane Multiphase Systems. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP30) Kumar, A.*; Veluswamy, H.P.; Kumar, S.; Kumar, R.; Linga P. Study of Mixed Methane/Tetrahydrofuran Hydrates in Saline Water: Application to Methane Gas Storage & Transportation. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP29) Kumar, A.*; Daraboina, N.; Kumar, R.; Linga P. Study of Tetrahydrofuran -Methane Mixed Hydrates Using High Pressure Differential Scanning Calorimetry. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP28) Veluswamy, H.P.; Kumar, A.*; Kumar, S.; Kumar, R.; Linga P. Natural Gas Storage Via SNG (Solidified Natural Gas) Technology – Pathway to Commercialization, In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP27) Zheng, J.*; Khurana, M.; Zhang, P.; Linga P. Systematic evaluation of semiclathrate-based pre-combustion CO2 capture in presence of tetra-n-butylammonium fluoride (TBAF): effect of TBAF concentration and kinetic additives. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP26) Zheng, J.*; Khurana, M.; Zhang, P.; Linga P. Kinetic evaluation of clathrate process for pre-combustion capture in fixed bed reactor employing cyclopentane and cyclopentane/ tetrahydrofuran mixture as promoter. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP25) Khurana, M.; Zheng, J.*; Linga, P. Process evaluation of pre-combustion CO2 capture from fuel gas using gas hydrates. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP24) Too, J.L.*; Linga, P; Palmer, A.; Khoo, B.C.; Cheng, A. Hydraulic Fracturing of High Saturation Hydrate-bearing Sand. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP23) Kiran, B; Babu, P*; Karimi, I A; Linga, P. Optimum heat exchanger network for LNG cold energy utilisation in clathrate hydrate based desalination. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP22) Babu, P*; Nambiar, A; Linga, P. Optimization of process conditions for clathrate hydrate based desalination process. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP21) Chong, Z. R.*; Yin, Z.; Linga, P., Experimental study on the production behavior from hydrate bearing sediment incorporating a horizontal wellbore. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP20) Chong, Z. R.*; Yin, Z.; Linga, P., Experimental analysis on the production behavior from hydrate bearing sediment using depressurization method. In 9th International Conference on Gas Hydrates, Colorado, USA, June 25-30, 2017.

(CP19) Chong, Z. R.; Yin, Z.; Linga, P.*, Production behavior from hydrate bearing marine sediments using depressurization approach. In 8th International Conference on Applied Energy, Beijing China, 2016. *Proceedings published in Energy Procedia (2017), 105, 4963-4969.*

(CP18) Veluswamy, H. P.; Premasinghe, K. P.; Linga, P.*, CO_2 Hydrates – Effect of additives and operating conditions on the morphology and hydrate growth. In 8th International Conference on Applied Energy, Beijing China, 2016. *Proceedings published in Energy Procedia (2017), 105, 5048-5054.*

(CP17) Veluswamy, H.P.*; Yang, T.; Linga, P.; Morphology study on hydrogen/tetrabutylammonium bromide semiclathrate crystals. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP16) Veluswamy, H.P.*; Yew, J.C.; Linga, P.; Macroscopic kinetics of mixed hydrogen hydrate formation with propane as a promoter. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP15) Daraboina, N.*; Linga, P.; Ripmeester, J.; Walker, V.K.; Englezos, P.; The unusual behavior of methane/ethane/propane hydrate crystals in the presence of inhibitor at low pressure. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP14) Loh, M.*; Too, J. L.; Falser, S.; Linga, P.; Khoo, B.C.; Palmer, A. C.; Gas production from methane hydrates in a dual wellbore system. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP13) Too, J. L.*; Loh, M.; Linga, P.; Khoo, B.C.; Palmer, A. C.; Hydraulic fracturing of hydrates to increase the production of methane hydrates. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP12) Mekala, P.; Babu, P.*; Sangwai, J.S.; Linga, P., Methane hydrate formation and dissociation in seawater and silica sand. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP11) Babu, P.*; Ho, C.Y.; Kumar, R.; Linga, P., Effect of liquid promoters on hydrate formation in a fixed bed column with silica sand. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP10) Babu, P.*; Yao, M.; Datta, S.; Kumar, R.; Linga, P., Impact of tetra-n-butyl ammonium nitrate (TBANO3) on hydrate formation from fuel gas mixture. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP9) Kumar, A.*; Linga, P.; Kumar, R.; Carbon dioxide capture from a flue gas and fuel mixture by hydrate formation in silica gel and silica sand media. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP8) Babu, P.*; Kumar, R.; Linga, P., Fixed bed reactor design: An opportunity to apply the clathrate process for carbon dioxide capture and seawater desalination. In 8th International Conference on Gas Hydrates, Beijing, 2014.

(CP7) Babu, P.; Yang, S. H. B.; Dasgupta, S.; Linga, P.*, Methane Production from Natural Gas Hydrates via Carbon Dioxide Fixation. In 6th International Conference on Applied Energy, Taipei, 2014. *Proceedings published in Energy Procedia (2014), 61, 1776-1779*

(CP6) Babu, P.; Chin, W. I.; Kumar, R.; Linga, P.*, The impact of pressure and temperature on tetra-n-butyl ammonium bromide semi-clathrate process for carbon dioxide capture. In 6th International Conference on Applied Energy, Taipei, 2014. *Proceedings published in Energy Procedia (2014), 61, 1780-1783*

(CP5) Daraboina, N.; Linga, P.; Ripmeester, J.; Englezos, P., Experimental investigation of the effect of poly-N-vinyl pyrrolidone on methane/propane clathrate in the presence of silica sand. In 7th International Conference on Gas Hydrates, Edinburgh, 2011.

(CP4) Linga, P.*; Ripmeester, J. A.; Englezos, P., Assessment of the medium-pressure clathrate hydrate process for CO2 capture in a new apparatus. In 6th International Conference on Gas Hydrates, Vancouver, 2008.

(CP3) Nam, S.-C.; Linga, P.*; Haligva, C.; Ripmeester, J. A.; Englezos, P., Kinetics of hydrate formation and decomposition of methane in porous media. In 6th International Conference on Gas Hydrates, Vancouver, 2008.

(CP2) Kumar, R.; Linga, P.*; Englezos, P., Pre and Post Combustion Capture of Carbon dioxide via Hydrate Crystallization. In EIC Climate Change Conference, Ottawa, 2006.

(CP1) Linga, P.; Kumar, R.; Englezos, P.*, The clathrate hydrate process for post and pre combustion capture of carbon dioxide. In Protection and Restoration of the Environment VIII, Chania, 2006.

(CT19) Yin, Z*, Moridis, G.; Tan, H. K.; Linga, P., Calibration of a numerical model against experimental data of methane hydrate formation and dissociation in a sandy porous medium. In 11th International Methane Hydrate R&D Workshop (Fiery Ice), Corpus Christi, December 6 – 8, 2017.

(CT18) Chong, Z. R.*, Yin, Z.; Zhao, J.; Linga, P., Energy recovery from natural gas hydrates: effect of horizontal flow conduit incorporation on gas and water production. In International Meeting on Petroleum Engineering, Singapore, 16-17 November 2017.

(CT17) Yin, Z.*; Chong, Z. R.; Moridis, G.; Linga, P., Energy recovery from natural gas hydrates: modelling of natural gas hydrate dissociation in porous media by depressurization with a parametric study. In Petroleum Engineering Meeting, Singapore, November 16 – 17, 2017.

(CT16) Yin, Z*, Moridis, G.; Tan, H. K.; Linga, P., Numerical modelling of natural gas hydrate dissociation and fluids flow behavior in sandy porous medium. In Applied Energy Symposium & Forum (WES-CUE) 2017, Singapore, June 18 – 21, 2017.

(CT15) Veluswamy, H. P.; Linga, P.*, SNG Technology via Clathrate Hydrates for Large Scale Storage of Natural Gas. In AIChE Annual Meeting, San Francisco, November 13 – 18, 2016.

(CT14) Chong, Z. R.; Linga, P.*, Natural Gas Hydrates in Marine Locations: Effect of Stimulation Temperature on Gas and Water Production. In AIChE Annual Meeting, San Francisco, November 13 – 18, 2016.

(CT13) Babu, P.; Linga, P.*, Progress on the hydrate based gas separation (HBGS) process for carbon dioxide capture. In AIChE Annual Meeting, Salt Lake City, 2015.

(CT12) Babu, P.*; Zheng, J.; Linga, P., Effect of tetrahydrofuran on the clathrate process for pre-combustion capture of carbon dioxide. In 65th CSChE, Calgary, October 4-7, 2015.

(CT11) Babu, P.; Linga, P.*, Potential for Semiclathrates for CO_2 capture. In 19th Symposium on Thermophysical Properties, Boulder, 2015.

(CT10) Babu, P.; Kumar, R.; Linga, P.*, Semiclathrates for CO_2 capture. In AIChE Annual Meeting, Atlanta, 2014.

(CT9) Mekala, P.; Babu, P.; Sangwai, J.*; Linga, P., Experimental Investigations on Natural Gas Recovery from Gas Hydrates using Thermal Stimulation. In International Symposium on Fusion Technology in Oil and Gas Development, South Korea, January 2014.

(CT8) Babu, P.; Kumar, R.; Linga, P.*, Progress on the hydrate based gas separation (HBGS) process for carbon dioxide capture. In AIChE Annual Meeting, San Francisco, 2013.

(CT7) Babu, P.; Yee, D.; Linga, P.*; Palmer, A.; Khoo, B. C.; Tan, T. S.; Rangsunwigit, P., Transient Hydrate Formation/Dissociation of Methane Hydrates in Porous Media at Hydrate Stable Conditions. In 2013 AIChE Annual Meeting, San Francisco, 2013.

(CT6) Babu, P.; Linga, P.*, The clathrate process for pre-combustion capture of carbon dioxide employing a novel fixed bed reactor. In 2012 AIChE Annual Meeting, Pittsburgh, 2012.

(CT5) Linga, P.*; Haligva, C.; Ripmeester, J. A.; Englezos, P., Enhanced rate of hydrate formation in a silica sand matrix compared to a stirred vessel. In 237th ACS National Meeting & Exposition, Fuel Chemistry Division, Salt Lake City, 2009.

(CT4) Linga, P.; Kumar, R.*; Ripmeester, J. A.; Englezos, P., Progress on the gas hydrate process for CO_2/N_2 and CO_2/H_2 separation using a large scale apparatus. In 237th ACS National Meeting & Exposition, Fuel Chemistry Division, Salt Lake City, 2009.

(CT3) Kumar, R.*; Linga, P.; Ripmeester, J. A.; Englezos, P., Capture of carbon dioxide through clathrate hydrate crystallization In 8th World Congress of Chemical Engineering: Incorporating the 59th Canadian Chemical Engineering Conference and the 24th Inter American Congress of Chemical Engineering, Montreal, 2009; p 512.

(CT2) Kumar, R.*; Linga, P.; Adeyemo, A.; Ripmeester, J. A.; Englezos, P., Post-combustion capture of carbon dioxide by clathrate hydrate crystallization. In CHEMRAWN-XVII and ICCDU-IX Conference on Greenhouse Gases Mitigation and Utilization, Kingston, Canada, 2007.

(CT1) Linga, P.; Kumar, R.*; Englezos, P., Pre and post-combustion capture of carbon dioxide by clathrate hydrate crystallization. In CSChE Conference, Sherbrooke, 2006.

GRADUATE STUDENTS SUPERVISED

Key facts: Graduated 5 PhD students, 2 MEng students and 1 MSc student

- Ponnivalavan BABU, PhD, National University of Singapore (2010 – 2014, graduated)
- Hari Prakash VELUSWAMY, PhD, National University of Singapore (2011-2015, graduated)
- Jun Lin TOO, PhD, National University of Singapore (2013-2017, graduated)
- Zheng Rong CHONG, PhD, National University of Singapore (2014-2017, graduated)
- Junjie ZHENG, PhD, National University of Singapore (2014 – 2018, expected)
- Matilda LOH, MEng, National University of Singapore (2013, graduated)
- She Hern Bryan YANG, MEng, National University of Singapore, (2014, graduated)
- Abhishek P. NAMBIAR, MSc (project), National University of Singapore (2014, graduated)
- Zhenyuan YIN, PhD, National University of Singapore (2016-2019, expected)
- Gaurav PANDEY, PhD, IIT Madras – NUS Joint PhD program (2016-2019, expected)

International Visiting Students

- Atsadawuth SIANGSAI, PhD, Visiting Scholar for 3 months, Chulalongkorn University, graduated in May 2015
- Prathyusha MEKALA, PhD, Visiting scholar for 3 months (Jun-Aug 2013), Indian Institute of Technology Madras, graduated in 2014, now Assistant Professor in University of Petroleum and Energy Sciences (UPES) Dehradun, India
- Kazuki FUKUZAWA, MSc, Visiting Scholar for 1 month (Sep-Oct 2016), Keio University, Japan.
- Yuta ARAI, MSc, Visiting Scholar for 1 month (Aug-Sep 2017), Keio University, Japan
- Hyunho KIM, PhD, Visiting Student for 5 months (Jan-May 2018), Seoul National University, South Korea
- Jia-nan Zheng, PhD, Visiting Student for 3 months (May-July 2018), Dalian University of Technology, China

RESEARCH FELLOWS, RESEARCH ASSOCIATES & RESEARCH ENGINEERS SUPERVISED

Key facts: Mentored 15 research fellows, research engineers and visiting scientists

1. Dr. Li Huang, Visiting Scientist from QIMG China (2018.11 – Present), Assistant Professor in Qingdao Institute of Marine Geology, China
2. Dr. Zheng Rong CHONG, Research Fellow (2017.09 – present)
3. Dr. Jun Lin TOO, Research Fellow (2017.03 – present)
4. Dr. Tianbiao HE, Research Fellow (2017.07 – 2018.05), Associate Professor in China University of Petroleum East China, Qingdao.

5. Dr. Zhongjin HE, Research Fellow (2015.06 – 2018.08), now an Associate Professor in China University of Geosciences Wuhan, P. R. China.
6. Dr. Ponnivalavan BABU, Research Fellow (2014.10 – 2019.01)
7. Dr. Asheesh KUMAR, Research Associate (2016.05 – 2018.07), Postdoc in the University of Western Australia, Australia
8. Dr. Hari Prakash VELUSWAMY, Research Fellow (2015.11 – present)
9. Dr. Maninder KHURANA, Research Fellow (2016.05 – present)
10. Mr. Abhishek P. NAMBIAR, Research Engineer (2015.10 – 2019.01)
11. Dr. Jianzhong ZHAO, Visiting Scientist from TUT China (2017.01 – 2017.12), now an Associate Professor in Taiyuan University of Technology, China
12. Dr. Baoyong ZHANG, Visiting Scientist from HUST China (2017.01 – 2017.12), now Professor and Dean in Heilongjiang University of Science and Technology, China
13. Dr. Kiran BANDARU, Research Fellow (2015.11 – 2017.05), now an Assistant Professor in VIT India
14. Dr. Jagadeesh Babu VELURU, Research Fellow (2015.04 – 2016.01), Now a Scientist SIMTech in Singapore
15. Mr. Sharad KUMAR, Research Engineer (2016.08 – 2017.02), now an Entrepreneur
16. Dr. Mingjun YANG, Visiting Scientist from DUT China (2015.01 – 2015.12), now a Professor in Dalian University of Technology, China

UNDERGRADUATE STUDENTS SUPERVISED (RESEARCH PROJECTS)

Key facts: Supervised 50+ undergraduate thesis projects

1. Muhammad Uzair KHAN, Final Year Project (AY2017-18)
2. LIU Zhenhao, Kelvin, Final Year Project BTECH (AY2018-19)
3. CHANG Kai-Hsun, Final Year Project BTECH (AY2018-19)
4. LIN Yanjie, Final Year Project (AY2017-18)
5. Regine MOH, Final Year Project (AY2017-18)
6. MUHAMMAD Farhan Bin Mohd Ridwan, Final Year Project (AY2017-18)
7. Kaneson MACHAPU, Final Year Project BTECH (AY2017-18)
8. LIAO Junxiong, Final Year Project (AY2016-17)
9. CHAN Jian Hua Rudi, Final Year Project (AY2016-17)
10. LOW Jia Wee, Final Year Project (AY2016-17)
11. LIM Wen Jun, Final Year Project (AY2016-17)
12. WONG Wen Qiang, Final Year Project (AY2016-17)
13. Sharanya Sharma VEDULA, Final Year Project (AY2016-17), *Second author in Kumar et al. J CHEM THERMODYN (2018), 117, 2-8.*
14. TAN Jun Hao Clifton, Final Year Project (AY2016-17)
15. LEE Pei Yit, Final Year Project (AY2016-17)
16. Krittika BHATNAGAR, Final Year Project (AY2016-17)
17. KOH Jun Wee, Final Year Project (AY2016-17)
18. Jain DHWANI, Final Year Project (AY2016-17)
19. Kulesha Priyalal PREMASINGHE, Final Year Project (AY2016-17)
20. CHIEW Peng Sheng, Final Year Project BTECH (AY2015-16)
21. Arjun MULLOTH, Final Year Project (AY2015-16)
22. Sharad KUMAR, Final Year Project (AY2015-16), *Second author in Veluswamy et al. FUEL, (2016), 182, 907-919*.
23. HONG Qi Wei, Final Year Project (AY2015-16)

24. NG Jing Heng, Final Year Project (AY2015-16)
25. Girish Anand PUJAR, Final Year Project (AY2015-16), *Second author in Chong et al. APPL ENERG, (2016), 177, 409-421*.
26. LEE Yean Kuan, Final Year Project (AY2015-16), *Co-first author in Zheng et al. J NAT GAS SCI ENG (2016) in press.*
27. LU Li, Final Year Project (AY2015-16)
28. WONG Alison Jia Hui, Final Year Project (AY2015-16), *Second author in Veluswamy et al. CHEM ENG J, (2016), 290, 161-173*.
29. ANG Wei Jun, Final Year Project (AY 2014-15), *Co-first author in Veluswamy et al. CHEM ENG SCI (2015), 132, 186-199*
30. CHAN Hui Min Adeline, Final Year Project (AY 2014-15), *Second author in Chong et al. J NAT GAS SCI ENG (2015), 27, 178-189*.
31. Stuti DATTA, Final Year Project (AY 2014-15)
32. ANG Chek Keng, Final Year Project (AY 2014-15)
33. ONG Hong Wen Nelson, Final Year Project (AY 2014-15), *Co-first author in Babu et al. ENERGY (2016), 94, 431-442*.
34. Geoffrey TJIUPEK, Final Year Project (AY 2014-15)
35. Ganank Atulkumar SRIVASTAVA, Final Year Project (AY 2014-15)
36. CHEN Jian Yu, Final Year Project (AY 2013-14), *Co-author in Veluswamy et al. CHEM ENG SCI (2015), 126, 488-499.*
37. Sam Fu Sheng CHUA, Final Year Project (AY 2013-14), *Co-author in Yang et al. APPLIED ENERGY (2015), 162, 1633-1652.*
38. YANG Ting, Final Year Project (AY 2013-14), *Co-first author in Veluswamy et al. CRYST GROWTH DES (2014), 14 (4), 1950-1960.*
39. TEO Siang Ling Grace, Final Year Project (AY 2013-14)
40. Wincent Marciono MAK, Final Year Project (AY 2013-14)
41. HO Chie Yin, Final Year Project (AY 2013-14), *Co-first author in Babu et al. ENERGY (2014), 70, 664-673.*
42. YEW Jin Chaw, Final Year Project (AY 2013-14), *Co-author in Veluswamy et al. J CHEM ENG DATA (2015), 60, 228-237*.
43. CHIN Weng Inn, Final Year Project (AY 2013-14), *Co-first author in Babu et al. IND ENG CHEM RES (2014), 53 (12), 4878-4887; co-author in Veluswamy et al. INT J HYDROGEN ENERG (2014) 39 (28), 16234-16243.*
44. Stuti DATTA, UROP Project (AY 2013-14), *Co-author in Babu et al. ENVIRON SCI TECHNOL (2014), 48 (6), 3550-3558; co-author in Babu et al. ENERGY (2014) 78, 458-464.*
45. LIM Hanbin, Final Year Project (AY 2012-13)
46. HO Leong Chuan, Final Year Project (AY 2012-13), *Co-first author in Ho et al. ENERGY (2013), 63, 252-259.*
47. ONG Sze Sian, Final Year Project (AY 2012-13)
48. XU Kuo, Final Year Project (AY 2012-13)
49. LIM Yu An, Final Year Project (AY 2012-13), *Co-first author in Lim et al. CRYST GROWTH DES (2013), 13, (5), 4587-4596.*
50. SIEW Keng Loong Marcus, Final Year Project (AY 2012-13)
51. Sajawal ZAHID, Final Year Project (AY 2012-13)
52. YAO Minghuang, Final Year Project (AY 2012-13), *Co-author in Babu et al. ENVIRON SCI TECHNOL (2014), 48 (6), 3550-3558.*

53. YANG Ting, UROP Project (AY 2012-13), *Co-author in Babu et al. J CHEM THERMODYN (2013), 61, 58-63.*
54. LEONG Wei Quan Edmund, UROP Project (AY 2012-13)
55. Stella TAN Yun Hui, Final Year Project (AY 2011-12)
56. Den Syahril Bin Mohamed ISMAIL, Final Year Project (AY 2011-12)
57. Jianting WONG, Final Year Project (AY 2011-12)
58. NG Yong Kuan, Final Year Project (AY 2011-12)
59. HAO Yi, Final Year Project (AY 2011-12)
60. NG Jin Hin, Final Year Project (AY 2011-12)

STUDENT AWARDS & HONORS

- Advisee (Dr. Ponnivalavan Babu) received ChemEngineering Travel Award, MDPI Switzerland (2018)
- Advisee (Yanjie Lin) received AIChE Singapore Local Section Outstanding Undergraduate Final Year Research Thesis Award (2018)
- Advisee (Dr. Ponnivalavan BABU) received the Outstanding PhD Thesis Award in the International Conference on Gas Hydrates (ICGH9), Denver USA (2017)
- Advisee (Dr. Ponnivalavan BABU) received the AIChE Singapore Local Section Outstanding Young Researcher Award (2017)
- Advisee (Kulesha Premasinghe) received the AIChE Singapore Local Section Outstanding Undergraduate Final Year Project Award for his final year research project (2017)
- Advisee (Dr. Hari Prakash Veluswamy) received the Highly Commendable Award for the Young Chemical Engineer in Research Category of IChemE Singapore Awards (2016)
- Advisees (Alison Jia Hui WONG and Sharad KUMAR) received AIChE Singapore Local Section Outstanding Undergraduate Dissertation/Research Project Award for their FYP projects (2016)
- Advisee (Dr. Hari Prakash Veluswamy) received the AIChE Singapore Local Section 2016 Outstanding Postgraduate Dissertation Honorable Mention Award (2016)
- Advisee (Alison Jia Hui WONG) received the 30th FoE Innovation and Research Merit Award for her FYP Research Project
- Advisee (Stuti Datta) received the Outstanding Undergraduate Researcher (OUR) Award for her UROP Research Project (2015)
- Advisee (Ang Wei Jun) received the AIChE Singapore Local Section Outstanding Undergraduate Research Project Award for his final year research project (2015)
- Advisee (Stuti Datta) received the 29th FoE Innovation and Research High Achievement Award for her UROP research project (2015)
- Advisees (Ang Wei Jun and Nelson Ong) received the 29th FoE Innovation and Research Merit Awards for their final year research projects (2015)
- Advisees (Lim Yu An and Yang Ting) received the 27th FoE Innovation and Research Merit Awards for their research projects (2013)

RESEARCH COLLABORATORS

Key facts: Collaborated with scientists across 8 countries

- Professor Arthur Cheng (National University of Singapore, Singapore)
- Assistant Professor Nagu Daraboina (University of Tulsa, USA)
- Professor Peter Englezos (University of British Columbia, Canada)
- Professor S Farooq (National University of Singapore, Singapore)

- Professor I A Karimi (National University of Singapore, Singapore)
- Professor Boo Cheong Khoo (National University of Singapore, Singapore)
- Dr. Santi Kulprathipanja (UOP, Des Plaines USA)
- Associate Professor Rajnish Kumar (Indian Institute of Technology Madras, India)
- Dr. Judong Lee (Korea Institute of Industrial Technology, Busan South Korea)
- Professor Xiao-Sen Li (Guangzhou Institute of Energy Conversion, China)
- Dr. George Moridis (Lawrence Berkeley National Laboratory, USA)
- Professor Andrew Palmer (National University of Singapore, Singapore)
- Professor Patrice Paricaud (ENSTA ParisTech, France)
- Professor Pramoch Rangsunvigit (Chulalongkorn University, Thailand)
- Dr. John Ripmeester (National Research Council Canada)
- Associate Professor Jitendra S. Sangwai (Indian Institute of Technology Madras India)
- Mr. Hoon Kiang Tan (Lloyd's Register Global Technology Centre Pte Ltd, Singapore)
- Professor Thiam Soon Tan (Singapore Institute of Technology, Singapore)
- Professor Virginia Walker (Queens University, Canada)
- Professor Mingjun Yang (Dalian University of Technology, China)
- Associate Professor Jianzhong Zhao (Taiyuan University of Technology, China)
- Associate Professor Bao-Yong Zhang (Heilongjiang University of Science and Technology, China)
- Professor Peng Zhang (Shanghai Jiao Tong University, China)

REFEREE IN JOURNALS

Key facts: Peer reviewer for 25+ international journals in Energy and Engineering; received outstanding reviewer recognition certificate from six journals

ACS Sustainable Chemistry & Engineering	Fluid Phase Equilibria
ACS Central Science	Fuel
Advanced Materials	Industrial & Engineering Chemistry Research
AIChE Journal	International Journal of Greenhouse Gas Control
Applied Energy	International Journal of Heat and Mass Transfer
Asia Pacific Journal of Chemical Engineering	International Journal of Hydrogen Energy
Canadian Journal of Chemical Engineering	Ionics
Canadian Journal of Chemistry	Journal of Chemical and Engineering Data
Chemical Engineering Journal	Journal of CO_2 Utilization
Chemical Engineering Science	Journal of Crystal Growth
Crystal Growth & Design	Journal of Natural Gas Science and Engineering
Energies	Journal of Petroleum Science and Engineering
Energy	Journal of Physical Chemistry
Energy & Environmental Science	Korean Journal of Chemical Engineering
Energy & Fuels	Langmuir
Energy Technology	Materials Chemistry and Physics
Environmental Science & Technology	Oil & Gas Journal

PROFESSIONAL AFFILIATIONS & INTERESTS

- Registered Professional Engineer (P.Eng.) since June 2018, Professional Engineer Board (PEB) Singapore
- Honorary secretary and webmaster of AIChE Singapore Local Section since 2014
- Member of American Chemical Society (ACS), AIChE & Canadian Society of Chemical Engineers (CSChE)
- Volunteer in a graduate student orientation program held in 2004
- Elected as General Secretary (Maintenance) in hostel (Strength: 450 students) during the Master's degree
- Elected President of the Chemical Engineering Association in the 4th year during undergraduate degree (Strength: 67 students)